Polycarbonate flame retardant alloys - contain copolymer, graft polymer and poly:organo:siloxane-polycarbonate block copolymer, for good mechanical properties

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Abstract of **DE4016417**

Polymer alloys comprise (A) 40-70 wt.% of a thermoplastic aromatic polycarbonate opt. contg. 2-10 wt.% bound halogen, pref. bromine; (B) 5-30 wt.% of a thermoplastic copolymer of 50-95 wt.% styrene alpha-methylstyrene, halogenostyrene and/or alkylated styrene and 5-50 wt.% (meth)acrylonitrile, alkyl (meth)acrylate, maleic acid anhydride, N-substd. maleinimide and/or vinylacetate; (C) 0-25 wt.% of graft polymer prepd. from (i) 50-90 pts. wt. of a mixt. of 50-95 wt.% styrene, alpha-methylstyrene, methylmethacrylate and/or and 5-50 wt.% (meth)acrylonitrile, methylimethacrylate, maleic acid anhydride, N-substd. maleinimide or their mixts., (ii) 10-95 pts. wt. of a rubber of Tg up to 10 deg.C, (D) 1-25 wt.% of a phosphorus cpd. of formula (I) or (II); (E) 0.5-20 wt.% of a thermoplastic polydiorganosiloxane-polycarbonate block copolymer having a Mw of 10000-200000, an aromatic carbonate content of 5-75 wt.%, a diorganosiloxy unit content of 25-95 wt.% prepd. from alpha,omega-biohydroxyaryloxy polydiorganosiloxanes, with a polymsn. degree Pn of 5-200, pref. 10-100; and (F) if (A) contains no halogen, a halogen contg., pref. bromine contg. compound contg. 40-80 wt.% halogen. In formulae R = a direct bond, -CH2-, -C(CH3)H- or -C(CH3)2-; x = 0, 1 or 2; y = 1 and if x= 2, can be 2 or 3; R10 = 1-8C alkyl; z = 0, 1 or 2; R1-R3 = 1-20C hydrocarbon opt. substd. and/or alkyl or aralkyl substd. 6-20C aryl; and m = 0 or 1. USE/ADVANTAGE - The compsns. have good mechanical properties and anti-inflammation properties as well as high (notched) impact resistance, and heat shape retention without the need for the addn. of fluorinated polymers. (10pp Dwg.No.0/0)